Social consensus and the encoding of consistent and inconsistent information: When one’s future audience orients information processing

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Abstract

The present study investigated whether and how social consensus affects the way perceivers encode information concerning a deviant member of a stereotyped group. Participants formed an impression of a gay person described by means of both positive and negative behaviours. Participants also learned that they had to communicate their impression to an unidentified audience whose stereotype about gays was unknown or to an ingroup audience which was presented to be either positive or negative about gays. Results indicated that participants who ignored the identity of the audience and its position towards gays devoted more time to examine the information than participants who had been informed about the audience and its opinion about gays. More importantly, participants spent less (more) time to encode information that was in line (at odds) with the stereotype of the audience. Results are discussed in terms of the interplay between cognitive and social factors in general, and of recent evidence about inconsistency-resolution effect and consensual beliefs in particular.

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information about a member of a stigmatized social group is affected by the content of the stereotypic beliefs thought to prevail in the context. In other words, we think that people’s understanding of the larger social setting influences the type of information that needs to be dealt with and how this ought to be done.

DEALING WITH CONFIRMING AND DISCONFIRMING INFORMATION

Within social psychology, the way people approach confirming and disconfirming information has been tackled from different vantage points, namely from the schema, person memory, and attribution perspectives. Research adopting the schema approach asserts that stereotypes may facilitate the interpretation of confirming information by allowing perceivers to rely on their prior conceptualization in order to comprehend specific events (Bodenhausen, 1990; Fiske & Neuberg, 1990; Macrae, Milne, & Bodenhausen, 1994; Von Hippel et al., 1995). Thanks to their stereotypes, perceivers quickly extract the thematic meaning of consistent information without the need for additional processing of the details. When the incoming information matches schema knowledge, attention to that piece of information decreases and cognitive resources are being redirected to information which is more difficult to understand (Sherman, Macrae, & Bodenhausen, 2000).

The person memory line of work shows that compared to consistent information, inconsistencies with prior expectations trigger additional processing at the encoding stage (Hastie & Kumar, 1979; Sherman et al., 2000; Srull & Wyer, 1989). This additional work likely results in more numerous and stronger associative links between the inconsistent information and the other pieces of information or the perceivers’ prior knowledge on the issue (Hastie, Park, & Weber, 1984; Wyer, Bodenhausen, & Srull, 1984).

Empirical contributions coming from the attribution area demonstrated that perceivers are not simply working more scrupulously in order to reconcile prior expectations with the contradicting data but that they also need to explain away their occurrence (Crocker, Hannah, & Weber, 1983; Pyszczynski & Greenberg, 1981; Coull, Yzerbyt, Castano, Paladino, & Leemans, 2001). For instance, Stern, Marr, Millar, and Cole (1984) found that participants asked to form an impression about individual targets spent more time processing inconsistent over consistent information and, more importantly, also spontaneously included explanations of inconsistent behaviours when describing the individual targets.

Somewhat surprisingly, the available work on the way perceivers encode confirming and disconfirming information about social targets has tended to ignore the fact that people are not isolated information processors but find themselves in the midst of complex and meaningful social networks. In our view, however, perceivers’ tendency to devote more attentional resources to one type of information over another will depend, at least in part, on their knowledge regarding the views shared within their social environment in general and their immediate audience in particular (Carnaghi, Yzerbyt, Cadinu, & Mahaux, 2004; V. Y. Yzerbyt & A. Carnaghi, submitted; Social consensus and the maintenance of stereotypic beliefs: Knowing whom you’ll talk to affects what you do with the information, Personality and Social Psychology Bulletin). Innovative as this perspective may be with respect to the issue of stereotype change, it shares a number of features with a large body of research conducted in the social influence domain (Abrams & Hogg, 1988; Asch, 1951; Clark & Maass, 1988; Deutsch & Gerard, 1955; Mackie, 1986; Mackie & Cooper, 1984; Moscovici, 1976; Sherif & Sherif, 1953; Turner, 1987) as well as in the communication area (Higgins, Rholes, & Jones, 1977; Lerner & Tetlock, 1999; Reicher, Spears, & Postmes, 1995).
SOCIAL INFLUENCE MECHANISMS IN ATTITUDES AND BELIEFS: FORMATION AND CHANGE

The importance of the social environment in shaping people’s attitudes and beliefs has been at the heart of some of the finest research in social psychology (Asch, 1951; Moscovici, 1976; Sherif & Sherif, 1953). There is indeed a large consensus among authors to identify the group as the birth place of the vast majority of people’s perceptions and judgments (Crandall, Eshleman, & O’Brien, 2002; Lewin, 1951; Newcomb, 1943; Sherif, 1936). As long as social actors consider their membership group as a referent group, they tend to align their attitudes and beliefs with the norm allegedly shared among their fellow members.

Stereotypes are prime targets of this social influence process (Haslam et al., 1996; Sechrist & Stangor, 2001; Stangor, Sechrist, & Jost, 2001; Wittenbrink & Henly, 1996). In a series of illustrative studies, Stangor et al. (2001) told participants about the beliefs held by other individuals (i.e. ingroup members) regarding African Americans. This information was either systematically more favourable or more unfavourable than the stereotype participants thought was shared within their ingroup. As expected, participants manifested a more positive (negative) stereotype when they learned that relevant others held a more favourable (unfavourable) stereotype. Additional work showed that stereotype change induced via such consensus feedback is not a matter of superficial compliance with the norm but produces objective changes at the cognitive level (Sechrist & Stangor, 2001, Exp. 2). Studies such as these strongly suggest that social actors are encouraged to profess specific stereotypic views to the extent that they perceive relevant others to cling to these same beliefs.

In sum, because holding certain stereotypes plays a key role in allowing people to be considered a decent representative of their group (Asch, 1951; Crandall et al., 2002; Levine & Russo, 1987; Sherif & Sherif, 1953), because people are preoccupied with the social significance of their beliefs (Turner, 1991; Wittenbrink & Henly, 1996), and because they rely on the beliefs of relevant others to shape their own beliefs, perceivers are likely to be influenced by others in matters of stereotypical expectancies (Haslam et al., 1996; Sechrist & Stangor, 2001; Stangor et al., 2001).

SOCIAL INFLUENCE MECHANISM IN COMMUNICATION AND ANTICIPATED COMMUNICATION SETTINGS

Communication offers an ideal means for investigating how and why social influence tailors the message that gets communicated as well as the cognitive processes that constitute the underpinnings of the construal of the message (Ruscher & Hammer, 1996; Ruscher, Fiske, & Schanke, 2000; Zajonc, 1960). When it comes to examining communication, a common experimental paradigm is the ‘anticipated public context’. Concretely, people are asked to communicate or justify their view about a specific issue to someone else. This audience, i.e. the recipient of the communication, may be present or only symbolically evoked.

Within social psychology, several lines of research have implemented this paradigm, of which the Communication Game model and the Accountability model are two examples. Taken together, these models have repeatedly shown that either the identity of the audience or its viewpoint on a given issue affects perceivers’ impression of a target (Higgins et al., 1977; Higgins & McCann, 1984) or perceivers’ attitudes (Tetlock, Skitka, & Boettger, 1989) and perceivers’ endorsement of the group norm (Barreto & Ellemers, 2000). Using their communication game, Higgins and colleagues (1977) found that communicators do not only convey an attitude regarding the target of impression that
mirrors the view of the audience toward that same target but that participants also tailor their message in order to espouse the position of the audience. For instance, Higgins et al. (1997) showed that participants tended to describe the target of impression using traits with evaluative implications that were consistent with the attitude of their recipients (for similar results in dyads, see also Ruscher, Hammer, & Hammer, 1996).

In the context of the accountability model, researchers not only focused on the message content but also on the cognitive processes that contribute to the formation of the message. Results showed that when participants know about the attitude of the audience, they normally shift their position toward the attitude advocated by the audience (Tetlock et al., 1989). Although a possible explanation for this finding is that people adopt the position advocated by the audience as a means to forgo the stress of arguing with opponents, to avoid public rejection, and to achieve self-presentational goals, research would suggest that the attitudinal shift is far from being a superficial change. People may well take into account the perspective of the audience with respect to the attitudinal object in such a way that, once the target of judgment has been reframed under the influence of the prospective audience, the position of the audience still exerts its impact on people’s judgment even in a private context (Pennington & Schlenker, 1999).

Quite a different story emerges when the position of the audience remains unknown. In this case, participants tend to work on the available target information in a more accurate manner so as to avoid objections coming from potential opponents (for similar results in the stereotype area, see Moreno & Bodenhausen, 1999). In particular, thought-listing data reveal that, compared to participants who are made aware of the position of the audience, people who do not know the audience’s viewpoint engage in a more complex and effortful thinking process (Lerner & Tetlock, 1999; Tetlock, Armor, & Peterson, 1994).

Although these various efforts make strong predictions regarding people’s endorsement of the audience’s position in actual or anticipated public contexts, they fail to spell out clear hypotheses regarding the way people process information when they are embedded in a meaningful social setting such as the anticipated public context. Is it the case that perceivers take into account the audience’s position when they appraise information that is consistent or inconsistent with the audience’s view or is the position held by the audience only playing a minimal role in the way people process the incoming information?

The present study investigates whether and how the stereotype held by a prospective audience about a given group alters the way people perceive a specific member of this group and examines the impact of social factors on the early cognitive processes involved in stereotyping. Participants were randomly assigned to one of three conditions. They either expected to meet with an audience who was unidentified and whose opinion about gays was unknown or with an audience comprising other students holding a positive view about gays or with an audience comprising other students holding a negative view about gays. Moreover, the information about the target of impression that was presented to the participants was held constant, partly positive and partly negative. Our focus was on the time spent reading the information. It is worth noticing that this procedure has not only the merit of making the viewpoint of the audience salient. It also has the advantage of eliciting perceivers’ tendency to conform with the audience’s position (Tetlock et al., 1989) and inducing specific expectations towards the target of judgment (Pennington & Schlenker, 1999) because it stresses the fact that the audience will be appraising their message (Lambert et al., 2003).

As a general prediction, we expected participants to pay more attention to negative compared to positive behavioural information. This findings would replicate a long series of observations in social cognition showing that negative information is inherently more attention-grabbing and attention-holding than positive information (Fiske, 1980; Yzerbyt & Leyens, 1991). In line with previous findings in the accountability domain, we also hypothesized that participants would generally spend
more time reading behavioural information when they were not made aware of the view of the audience than when they were explicitly informed about the stereotype of the audience about gays.

More importantly, rather than examining the impact of the type of information *per se*, we were more interested in investigating when and how the same information could give way to an increased or to a decreased mode of processing time. Because perceivers tend to shift their position to conform to the audience’s view and because the stereotype held by a putative audience could help reframe the attribute associated to a given category, the propensity of an incoming piece of information to trigger a specific mode of processing is not constrained. Rather, the information gains a confirmatory or a disconfirmatory status with respect to its relation to the stereotype advocated by the audience. This means that perceivers should show a facilitation in dealing with information that is redundant with the audience-induced expectations. In sharp contrast, perceivers should take more time reading information that clashes with the audience-induced expectations. Because our procedure made it possible for a piece of information to be inconsistent with the stereotype of the audience in one condition but consistent with the stereotype of the audience in the other condition, we expected that processing time for a given piece of information would be shorter when it happened to be consistent with the stereotype held by the audience and longer when that same information happened to be inconsistent with the stereotype held by the audience.

**METHOD**

**Participants**

Fifty students enrolled at the University of Louvain volunteered to participate in the experiment. Three participants were excluded from the analyses because they were not native French-speakers.

**Materials**

On the basis of a pretest, we selected four traits, two positive and two negative, that were seen to be irrelevant for the group of gays. Next, for each irrelevant trait (e.g. athletic) we asked a small group of students to generate a semantically opposite trait (e.g. sedentary). Using these traits, we built two different lists of stereotype-irrelevant traits such that for each trait in a given list there was an antonymous trait in the other list. We then checked that these two lists of traits (i.e. one positive and one negative list) were perceived as equally irrelevant with respect to the target group but also as different in terms of valence (see Table 1).

In order to find a representative behaviour for each trait, a small sample of students was asked to read a list of personality traits and to provide a consistent behaviour for each of them. Next, another sample of students ($N=10$) rated the extent to which each behaviour was diagnostic of the corresponding trait on a 7-point scale ranging from 1 (= not at all) to 7 (= very much). We then selected four behaviours which differed significantly from the midpoint of the scale. Due to the nature of the lists, the same behaviour (e.g. he used to play basketball) served as consistent information with a trait in one list (i.e. athletic) as well as inconsistent information with a semantically opposed trait in the other list (i.e. sedentary). We checked that behaviours consistent with one or the other list did not differ in terms of representativeness ($M=5.9$ and $M=6.2$, for the positive and negative list respectively, $t(9)=1.33$, $p>0.22$). Also, the degree of inconsistency of the behaviours that were inconsistent with the positive list was the same as the degree of inconsistency of the behaviours that were inconsistent...
with the negative list ($M = 1.06$ and $M = 1.22$, for the negative and positive list respectively, $t(9) = 1.42$, $p > 0.19$) (see Table 2). Finally, four traits consensually seen to be typical of gays (i.e. elegant, complicated, artistic, and effeminate) were added to each list and four corresponding behaviours were included in the description of the target.

### Procedure and Dependent Variables

Upon their arrival at the laboratory, participants were seated in front of a computer and told that the study concerned the way people form an impression about a target and communicate it to others in a vis-à-vis interaction. Participants in the positive or negative stereotype audience conditions were informed that the experiment comprised three phases. In the first phase, participants had to learn the stereotype held by the audience about a given group. In the second phase, they had to form an impression about a member of that group. In an ostensibly final phase, they were expected to communicate their personal impression of the member to the audience. Participants in the unidentified audience condition were simply told about the two last phases. The third phase never took place. In all conditions, participants were told that the target was a gay man.

### Learning Phase

The learning phase only concerned participants in the positive or negative stereotype audience conditions. Participants were first informed that the audience comprised several students of the same university (Stangor et al., 2001, Exp. 1). They were then told that people often have some idea of what other people generally think about a given topic and that they would thus be provided with the
viewpoint of the audience about gays. This cover story has been shown to be successful in providing participants with the idea that the study involves a real communicational setting (Ruscher & Hammer, 1996) rather than a memory task. Then, participants read a series of eight traits presented one at a time on the computer screen. The list of eight traits started with two traits typical of gays followed by a random presentation of four irrelevant traits and another two typical of gays. Whereas in the positive stereotype audience condition, the irrelevant traits were all positive, they were all negative in the negative stereotype audience condition. We decided to also provide participants with typical traits in order to avoid any dismissal of the audience as being an unrealistic referent group.

Impression Formation Phase

All participants were provided with individuating information about the target, a gay man. Concretely, participants were asked to read a series of eight behaviours displayed in random order one at a time on the computer screen. Two behaviours illustrated two typical traits of gays. Four behaviours illustrated two irrelevant traits of gays. Whereas two of these four behaviours exemplified irrelevant traits that were part of the stereotype of the positive audience, the two other of these four behaviours illustrated irrelevant traits, on different dimensions, that were included in the stereotype of the negative audience. Finally, two behaviours exemplified the remaining two typical traits of gays. It is worth noting that, as far as the experimental conditions are concerned, the target always partly confirmed and partly disconfirmed the alleged beliefs of the audience about gays. We decided to present four behaviours that were diagnostic of typical traits in order to prevent participants from dismissing the target as an unreal case (for a similar procedure, see also Kunda & Oleson, 1995; Yzerbyt, Coull, & Rocher, 1999).

Participants paced themselves through the behavioural information, pressing the space bar when they felt ready to examine the next behaviour. The time spent reading each behaviour was recorded and served as our main dependent measure. Reading time of behavioural items can be considered as an on-line measure of attention allocation and stimuli interpretation (Fiske, 1980). Previous empirical contributions have shown that reading time detects the differential processing of consistent and inconsistent information, revealing faster reading times for the former than for the latter (Hastie & Kumar, 1979). Additionally, the research on person memory, attribution, and impression formation would suggest that longer reading times are indeed associated with perceivers’ attempt to explain away the inconsistency (Bargh & Thein, 1985).

At the end of the experiment participants were probed for suspicion about the cover story, debriefed, thanked for their participation, and dismissed.

RESULTS

The debriefing revealed that participants truly believed about the existence of the third phase of the experiment. This assured us that participants indeed thought that they found themselves in a communicational context. Before we examined the time participants took to read the behaviours comprising the description of the target, we removed outliers located at more than three standard deviations from the mean and reverse-transformed reading times (Howell, 1998). We then analysed these transformed reading time by means of $3 \times 2$ analysis of variance using audience (unidentified audience vs. positive stereotype audience vs. negative stereotype audience) as a between-subjects factor and valence of behaviours (positive vs. negative) as a within-subject factor.
We found a significant main effect of valence of behaviours, $F(1, 44) = 44.23, p < 0.001$. Participants were faster to read positive ($M = 4015.81 \text{ ms, } SD = 1777.85$) than negative information ($M = 5821.27 \text{ ms, } SD = 2399.04$). The main effect of audience was marginally significant, $F(2, 44) = 3.01, p < 0.06$. We further examined this main effect by means of two a priori contrasts. The first a priori contrast showed that participants in the unidentified audience condition took more time to read the information about the target ($M = 5764.54 \text{ ms, } SD = 2160.98$) than participants who knew the stereotype held by the audience ($M = 4423.59 \text{ ms, } SD = 1607.97$ and $M = 4567.5 \text{ ms, } SD = 1707.5$, for the positive and negative stereotype audience conditions, respectively), $t(44) = 3.19, p < 0.003$. The second a priori contrast compared the positive and negative stereotype audience conditions. No difference emerged between these two conditions, $t(44) < 1, ns$.

More importantly, the interaction between audience and valence was significant, $F(2, 44) = 4.09, p < 0.02$. We further analysed this two-way interaction by means of the same two a priori contrasts as above. The first contrast examined this interaction by confronting the unidentified audience condition to the two other conditions and was not significant, $t(44) = 1.69, ns$. The second contrast evaluated this interaction by comparing the two student audience conditions to each other. As expected, this contrast was significant, $t(44) = 2.25, p < 0.03$. As can be seen in Table 3, the relative advantage of being confronted with positive behaviours rather than negative behaviours was more important in the positive stereotype audience condition than in the negative stereotype audience condition.

**DISCUSSION**

The present efforts build upon previous research revealing perceivers’ propensity to tailor their message in order to espouse the position advocated by the audience (Higgins et al., 1977; Lerner & Tetlock, 1999; Reicher et al., 1995) as well as on more recent work showing perceivers’ endorsement of the beliefs consensually shared within their ingroup (Haslam et al., 1996; Sechrist & Stangor, 2001; Wittenbrink & Henly, 1996). Indeed, we proposed that a key element in the way perceivers gather information in the environment is their tendency to conform with the prevalent view held by a prospective audience.

The results of the present study send a most encouraging message regarding the viability of our conjecture. Replicating a number of results in the impression formation literature (Fiske, 1980),

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Table 3. Reading time (in milliseconds) of positive and negative behaviours as a function of the stereotype of the audience

<table>
<thead>
<tr>
<th>Audience</th>
<th>Behaviours</th>
<th>Unidentified</th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td></td>
<td>4682.14 ms</td>
<td>3390.59 ms</td>
<td>3974.71 ms</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1556.71)</td>
<td>(1694.71)</td>
<td>(1909.71)</td>
</tr>
<tr>
<td>Negative</td>
<td></td>
<td>6846.93 ms</td>
<td>5456.59 ms</td>
<td>5160.29 ms</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2867.50)</td>
<td>(1840.67)</td>
<td>(2276.36)</td>
</tr>
</tbody>
</table>

*Note: Standard deviations are given in parentheses.*

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1We also performed the same analysis on participants’ reading time for stereotypical behaviours. The first contrast opposing the unidentified stereotype condition to the student audience conditions was significant, $t(44) = 2.15, p < 0.04$. The second contrast comparing the two student audience conditions was not significant, $t(44) = 0.71, ns$.
participants generally spent more time reading negative than positive behaviours. Moreover, compared to participants who were aware of the nature of the audience and its stereotypic views about a target group, participants who expected to be confronted with an audience but were left ignorant regarding its identity and preconceptions slowed down their inspection of the available information. Such a pattern of data not only replicates previous results reported in studies using an accountability manipulation (Moreno & Bodenhausen, 1999) but it also extends prior findings by examining perceivers’ information gathering processes in the stereotyping domain.

The truly novel feature of the present study rested on the fine-grained analysis of perceivers’ information processing not only as a function of the type of information being encountered but also of the type of stereotype held by the audience. As our results showed, the stereotypical view of the audience about the target group structured participants’ allocation of the attentional resources towards the information they received about an individual member of this group. Participants took less time to process the information when the target displayed behaviours that were consistent rather than inconsistent with the stereotype of the audience. In other words, participants appeared ready to mobilize their cognitive resources in those cases where the incoming information was at odds with the stereotype entertained by the audience.

Rather than examining the impact of the type of information per se, we were more interested in investigating when and why people differently deal with the same piece of information depending on the context they were inserted in. As a matter of fact, we found that once the category-attribute relationship is redefined by the stereotype held by a putative audience (i.e. the local norm), the tendency of an incoming piece of information to trigger a specific mode of processing is largely determined by its connection with this stereotype. That is to say, the same information gave way to a more superficial versus more scrupulous mode of processing depending on whether it was redundant or at odds with the stereotype of the audience.

Our results are also in line with theoretical models that assert that perceivers are ready to endorse normative beliefs in order for them to affirm their attachment with important reference groups (Abrams & Hogg, 1990; Haslam, 1997) and with theories that propose that perceivers base their actual position upon the collective view to gain veridical knowledge about the social reality (Hardin & Higgins, 1996; Sherif, 1936). Indeed, our data are at the very least suggestive that perceivers’ conformity is far from being a matter of superficial compliance (Mackie, Gastardo-Conaco, & Skelly, 1992; Mackie, Worth, & Asuncion, 1990; van Knippenberg, Lossie, & Wilke, 1994). The fact that perceivers were ready to mobilize their cognitive resources to explain away or discount the relevance of any piece of inconsistent information could be taken as a strong indication of people’s active engagement in the preservation of contextually induced expectancies.

A particular interest of the present work rests on its implications for the key issue of stereotype revision and change. On the one hand, recent work on the construal of information shows that people are prone to engage in extensive cognitive work in an attempt to fence off a deviant member of a stigmatized group (Coull et al., 2001; Kunda & Oleson, 1995, 1997; Yzerbyt et al., 1999). As long as perceivers manage to consider the deviant as an atypical case, that is, an exception which proves the rule, the impact of the deviant on the stereotype of the group as a whole is likely to remain limited. On the other hand, work in the social influence and communicational domain indicates that people are likely to endorse the most consensual view allegedly shared within their group and tailor their judgment to suit the stereotype held by a putative audience.

The present study connects these two approaches by showing that people are likely to handle information in light of the views advocated by relevant others. The tendency to generalize or subtype the disconfirming information is moderated by the extent to which the information is at odds or coheres with the prevailing stereotype. In light of this, one may conjecture that people’s construal of the typicality of a deviant member is largely driven by their motivation to maintain the consensual
view essentially intact. Future work along the lines followed in the present study should help us delineate the specific role of social factors as a major determinant in the inertia of social beliefs.

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